



ENTERPRISE
INTEGRATION

MONITORING WITH THE **DIGITAL ROBOTICS ENGINE**

By providing a framework to automate, integrate and connect an entire IT ecosystem, the Digital Robotics Engine (DRE) from Enterprise Integration (EI) offers a powerful machine-learning-driven upgrade to existing IT activities as well as the power to report intelligently on your system.

As the main component of EI's machine-learning applications, DRE accepts, aggregates and processes data from different systems that normally can't communicate with one another. As the central source for data integration and monitoring on a network, DRE brings all information and controls to a single interface that's customizable and variable based on your specific needs.

The Digital Robotics Engine can:

- Operate with any Open API
- Work successfully with closed APIs that accepts its connections
- Recognize any script language or code
- Operate in any environment
- Automatically assimilate new data
- Take proactive and reactive action whenever necessary (and authorized) to keep your system running at peak efficiency, including automated healing of devices in response to performance issues



DYNAMIC INFRASTRUCTURE MAPPING

As DRE detects and analyzes your network, it gathers data that allows it to create a living picture of the current state and condition of every connection and device. This all happens automatically and can be called up to display and analyze at any time with a robust set of reporting and visual tools.

The process of creating the network map updates dynamically and results in a dataset that can be used to author automated tasking and maintain efficiency. DRE also employs a deep discovery process that captures and displays an inventory, topology and network design even for fragmented or ad hoc network spaces.

PROCESS AUTOMATION

The Digital Robotics Engine uses machine learning and artificial intelligence (AI) to learn your business processes and create a repeatable workflow to automate time-consuming routine tasks.

DRE reads your network and is able to interpret its topology based on the physical and logical characteristics of your systems. It can then connect with any open API to provide interactive control over applications and devices that you have installed. This unique insight drives creation of automated reporting, resource management and traffic control.

PERFORMANCE MONITORING

DRE's map of your network also includes metrics on resources used, general performance and normal acceptable operating conditions. When one of these departs from typically observed norms, DRE detects the change and can perform basic root cause analysis.

Because it has learned from your systems typical activities, it can detect abnormal spikes or slowdowns and use predictive analysis to determine if the situation is caused by a normal process or something unusual. It can also compare the activity to its recorded knowledge of similar systems to help decide whether the issue needs to be escalated to human intervention or if its automated maintenance routines can correct it.

NETWORK SECURITY

Having a complete understanding of a network's normal operation – including authorized processes, services and connectivity – is a key ingredient in a strong network security posture. DRE provides this, with the added ability to use machine learning to recognize the difference between authorized activity and suspicious activity.

DRE also intelligently interprets common security alerts and notifications, adding an extra level of vigilance that fully integrates with existing firewalls, monitoring software and security applications.

AUTOMATED RESPONSE TO NETWORK EVENTS

In the event of a serious network outage, it's important for an IT team to get to the root cause as quickly as possible. Traditional alerting tools do this job well when one or two devices lose their connection at the same time. However, this model fails when a single root cause results in a cascade of failures across the network. The team is overwhelmed with an event storm of tickets that need to be examined and cleared individually before taking a look at the root cause.

Having already learned the network environment, DRE is able to collect multiple similar alerts from hundreds or thousands of devices. It uses this information to trace back into the network topology and determine what the cascade of multiple tickets has in common. This is boiled down to a single help desk ticket that can be used to determine a root cause and suggest a potential solution in seconds rather than hours.



COMPLETE HISTORICAL DOCUMENTATION

With DRE in place to collect and collate all data generated by your local monitoring tools, the network administrator has access to an unprecedented record of every network event happening across the entire infrastructure.

This provides the ability to analyze and diagnose problems as they occur, to dig back into the “last known good” configuration and to truly understand your network architecture and how each device integrates with the ecosystem as a whole. This type of data is highly desired when it’s time to design an expansion or add capacity. With DRE, it’s automatically collected and stored long before you even know you have a need for it.

REAL-TIME ANALYTICS

DRE has the ability to roll up a wide range of data and metadata about your network and report on it in real time. This includes the output of monitoring applications, analysis or activity or user interaction or just about anything else you need to see.

The system is designed to provide answers in a simplified “pane of glass” on a single display but also provide a deep dive into the underlying information. The depth and breadth of the information and analysis into your environment is unlimited.

CUSTOM MONITORING VISUALIZATIONS

With a “single pane of glass” you can display a dynamic view of the live network’s status and operational capability. This view can be custom-designed and changed on the fly. At a glance you can view current bandwidth and receive diagnosis of current and historical network issues relating to the interface, quality of service and routing.

From the main screen, you can dive deeper into the system to analyze traffic – both the general flow and specific paths. These can be stored and recalled as preset or set up on demand. Every bit of visual data in the system can also be easily displayed with a historical viewpoint that compares differences in configuration, routing and inventory and the affect those changes had on performance.

DEVICE HEALING

As it lives on your network and ingests performance data on each device, DRE builds a picture of the optimum conditions for acceptable performance. When the actual live performance starts to diverge from these norms, DRE is immediately aware of the issue and can take action to fix the issue.

This can include adding capacity to virtual devices or simply rebooting a server according to your internal settings and permissions. This ability to self-heal keeps services up and running while also offering a complete analysis of the events or root causes to help narrow down the conditions that caused the disruption. desired when it's time to design an expansion or add capacity. With DRE, it's automatically collected and stored long before you even know you have a need for it.



THE DRE DIFFERENCE

Every network has a unique architecture that supports a different userbase and set of application. Enterprise Integration uses DRE to deliver a customized approach to the unique problems of each customer. EI specializes in dealing with any form of database, a wide range of languages and unique applications. DRE forms the centerpiece of a more efficient IT system that serves your needs better than ever and has the ability to deal with any new challenge as your needs change.